

**SINGLE SPECIES ACTION PLAN**  
for the conservation of the Príncipe Thrush  
*Turdus xanthorhynchus*

2014-2018



*Prepared by:* BirdLife International

2014



**Support for this action plan:**

The development and production of this action plan has been prepared with the financial support of the Aage V Jensen Charity Foundation, RSPB, SPEA and BirdLife International. The Species Action Planning Workshop for the Conservation of Príncipe Thrush together with Dwarf Olive Ibis, São Tomé Fiscal and São Tomé Grosbeak was held in São Tomé between 22 and 24 October 2012. It also benefited from inputs from a previous consultative meeting of experts held in Lisbon, Portugal in July 2012.

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**Revisions:**

This plan should be reviewed and updated every five years. An emergency review will be undertaken if there is a significant change to the species' status before the next scheduled review.

**Recommended citation:**

BirdLife International (2014). Single Species Action Plan for the conservation of the Príncipe Thrush *Turdus xanthorhynchus*. Cambridge, UK.

**Cover photo credits:** *Left:* Lynsey Crellin; *Right:* Martin Dallimer

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## **LIST OF ACRONYMS**

**ABS** - Associação dos Biólogos Santomenses (Santomean Biologists Association)

**CBD** – Convention on Biological Diversity

**CITES** - Convention on International Trade in Endangered Species of Wild Fauna and Flora

**ECOFAC** - Ecosystemes Forestiers d'Afrique Centrale, the EU sponsored Programme for Conservation and Rational Utilization of Forest Ecosystems in Central Africa

**IUCN** – International Union for Conservation of Nature

**MARAPA** - Mar, Ambiente e Pesca Artesanal (Sea, Environment and Artisanal Fisheries)

**PNP** - Parque Natural do Obô do Príncipe (Príncipe's Obô Natural Park)

**RSPB** – Royal Society for the Protection of Birds (BirdLife Partner in the UK)

**SPEA** - Sociedade Portuguesa para o Estudo das Aves / Portuguese Society for the Study of Birds (BirdLife Partner in Portugal)

## **FOREWORD**

Natural resources, especially the fauna and flora, are the basis of the existence of all mankind and the need for conservation is something that should be recognised by all the inhabitants of this planet. However, in recent years the exploitation of natural resources by man has had very serious consequences for the planet's biological diversity.

The island of Príncipe is prominent in the sub-region due to its high degree of species endemism, especially taking into account its small size. Of all the wildlife found in Príncipe, birds are without doubt the animal group whose ecology and conservation status is the best known.

The adoption in 1999 of Law 11/99 on the Conservation of Fauna, Flora and Protected Areas is another manifestation of national concern. It considers that the conservation of animal and plant species and of biodiversity in general requires a set of technical and legal measures allowing the natural evolution of populations and their genetic pools – which are our national and global heritage – and the sustainable use of these natural resources from a socio-economic perspective.

The Action Plan for the Conservation of Príncipe Thrush (*Turdus xanthorhynchus*) makes a thorough and accurate analysis of the current status of the population of this Thrush species found in the Gulf of Guinea, addressing its distribution, habitat, as well as its breeding biology. This document includes a set of priority actions to be achieved. It is a fundamental guide of the long road that we must walk, in the short and medium term, to save this species, thereby ensuring that future generations also have the opportunity to live with the species as part of national and international biodiversity heritage.

The preparation of this document involved the cooperation of international institutions, especially BirdLife International, and national institutions such as the Directorate General of Environment, the Association of Santomense Biologists (ABS), among others.

As a final note, it should be noted that the information contained in this Plan, in addition to contributing particularly to improve the basis of current knowledge and conservation status of the Príncipe Thrush, it also contributes to conservation and sustainable use of biodiversity in São Tomé and Príncipe.

**Daniel Ramos**

Director of Obo Natural Park in São Tomé and Príncipe

## EXECUTIVE SUMMARY

The Príncipe Thrush *Turdus xanthorhynchus* is a rare bird species endemic to the island of Príncipe, São Tomé e Príncipe in the Gulf of Guinea, West Africa where it has been recorded in lowland primary forest. It is estimated that there are fewer than 250 mature individuals of the species, now categorised as Critically Endangered in the IUCN Red List.

Historically, it is likely that its population suffered a dramatic reduction in extent of occurrence after human colonisation in the 1500s resulted in the loss of most of the island's original forest. Deforestation is still a threat, but much reduced by the recent protection of the majority of primary forest on Príncipe. Improved access to areas where the thrush occurs due to ecotourism developments on the island could increase pressure on the species and the forest resources unless if this is done sensitively. The species is very tame and may therefore suffer some mortality through opportunistic hunting by people who come to the forest to hunt monkeys and collect snails. Since it is restricted to one small island, it is potentially threatened by the introduction of alien species.

Much is still not known about the species, and various gaps in knowledge need to be filled in order to take effective conservation action on the species. These gaps include knowledge on population size and trends, breeding ecology, food preference and availability, occurrence and impacts of predation by monkeys and recently introduced genets, and whether seasonal variation occurs. A large part of Príncipe Island is inaccessible thus making it difficult to estimate the population size.

Most of the remaining primary forest on Príncipe is protected in the Parque Natural do Obô – Príncipe (PNOP) and there exists a management plan for protected areas. The implementation of the management plan is however minimal as there is limited capacity or resources for implementation.

The purpose of this five-year action plan is to improve the current knowledge base and conservation status of the Príncipe Thrush within the next five years. In the long-term this should contribute to the goal of increasing the population size of the Príncipe Thrush and maintain its current range, such that it is down-listed from the Critically Endangered category in the IUCN Red List. This purpose will be achieved through implementation of a set of activities that contribute to three main objectives: (1) Increase understanding of ecology, population size and distribution of species (Research and monitoring), (2) Support the legal mechanisms to halt the main threats and ensure legal protection laws refer the threatened species, and (3) Enhance the appreciation of value of this and other endemic species by the public in and beyond São Tomé e Príncipe. PNOP will be the lead agency for implementation of most of the actions, but other responsible agencies include Ministry of Agriculture, Universities, BirdLife International, HBD - Boa Vida, Permian and national conservation NGOs. This action plan will be reviewed after five years and updated based on new knowledge gathered and action undertaken within that time period.

## 1 – BIOLOGICAL ASSESSMENT

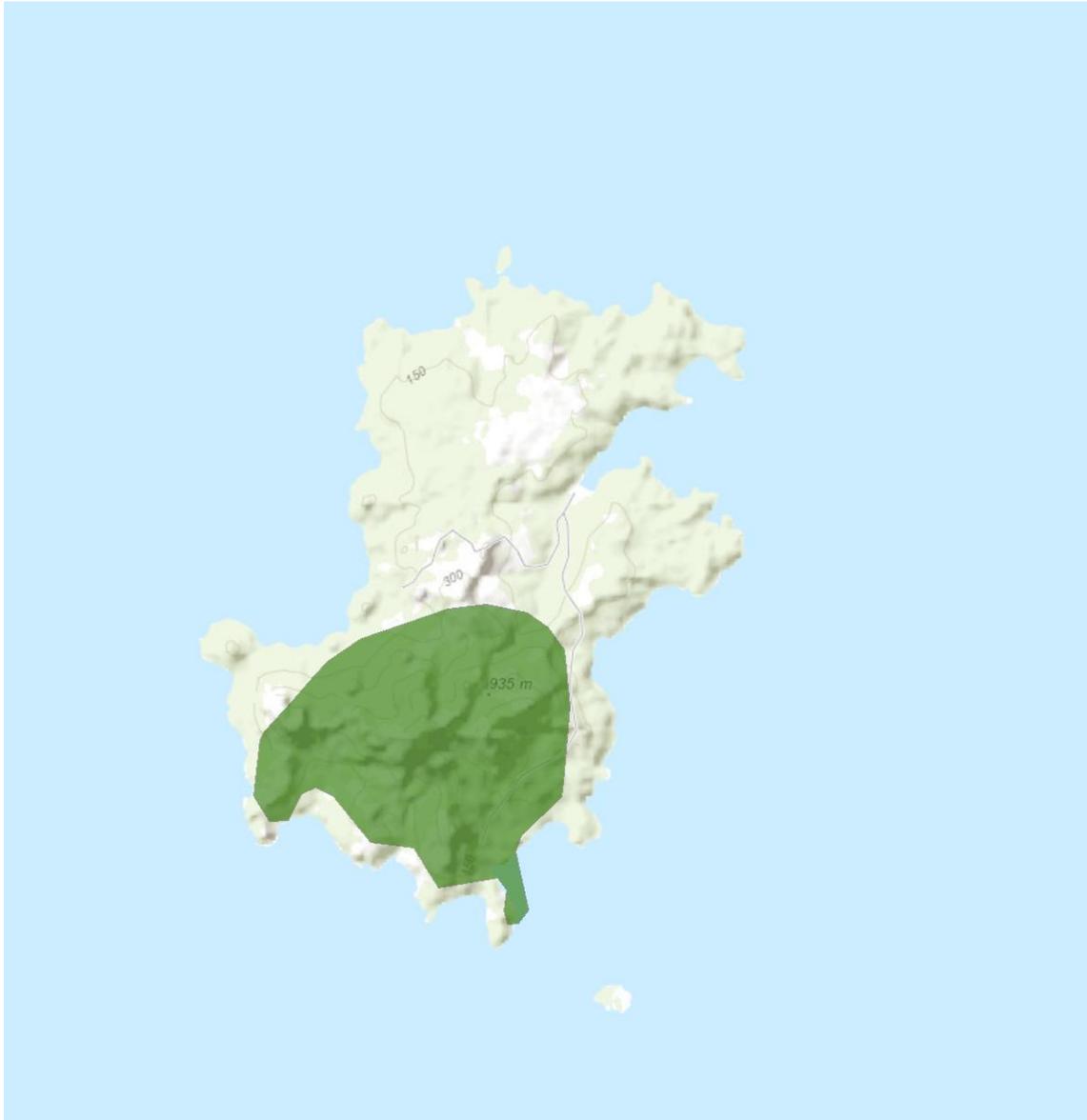
### Taxonomy and Identification

The Príncipe Thrush was recently recognised as a distinct species following Melo et al. (2010). It was split from *Turdus olivaceofuscus* (Sibley and Monroe 1990, 1993; Dowsett and Forbes-Watson 1993) into *T. olivaceofuscus* and *T. xanthorhynchus*. The analyses by Melo et al. (2010) indicated that the two populations differed substantially in size, bill shape and bill, eye and leg coloration as well as in several plumage characteristics. In addition, *T. xanthorhynchus* utters a low call of a type not previously recorded in the genus *Turdus*. Genetic evidence corroborated the phenotypic evidence: both taxa constitute clearly independent evolutionary lineages.

Identification as described by BirdLife International (2013), is as follows. With a length of 24 cm, the Príncipe Thrush is dull olive-brown above, from the head below the eye to its tail. The head itself is slightly darker. The chin and the throat are dusky buff with whitish streaks. It has dark, coarse and uneven dusky-buff scaling on buff-washed breast, shading to dusky-buff scalloping on whitish remaining underparts. Underwing coverts are pale orange-buff against creamy secondaries. Iris is bluish-white, and the bird has a narrow yellow eye-ring. Bill is large and bright yellow. Legs are dull yellow. Sexes are similar. Juvenile looks like adult with light buff flecking above and blotched brown below. The similar *T. olivaceofuscus* on São Tomé is larger and has dark legs and mostly dark bill, with paler, less coarse scaling below; its iris is dark brown to red and it has no eye-ring.

### Distribution

The Príncipe Thrush is endemic to the island of Príncipe, São Tomé e Príncipe in the Gulf of Guinea, West Africa. It is likely to be restricted to primary rainforest (Dallimer et al., 2010; Melo et al. 2010) (Figure 1).



**Figure 1.** Distribution of the Príncipe Thrush in the island of Príncipe (dark green areas)

### **Habitat requirements**

The species has been recorded in primary forest from the lowlands to c.800 m at least, although most birds occur above 400 m (Dallimer *et al.* 2010). It feeds mainly on invertebrates and fruit (Clement and Hathway 2000, del Hoyo *et al.* 2005). Jones and Tye (2006) indicate that older observations were of the thrush in Príncipe living on the ground and understorey up to 1.5m height in dense forest on high hills. Since its description in 1899, the species has always been restricted to primary rainforest (Naurois 1984). This habitat association contrasts with the wide range of biotopes used by the São Tomé Thrush and may reflect its vulnerability to hunting pressures rather than a habitat specialization (Dallimer *et al.* 2010). The Príncipe Thrush actively approaches humans and it is the tamest species of any bird on both islands. People who use the forest (hunters, parrot collectors and snail harvesters) therefore readily kill thrushes if the chance arises. This may explain why, as with the endemic land snail *Archachatina bicarinata*, the highest densities are restricted to the most inaccessible areas within the primary forest (Dallimer and Melo 2010).

## **Survival and productivity**

Breeding by *T. olivaceofuscus* prior to the recent taxonomic change was described as taking place from the end of July through to January, with a peak in October-December (Clement and Hathway 2000, del Hoyo *et al.* 2005). Its nest is a bulky cup of mixed dry vegetation and mud, covered externally with dead leaves, moss and twigs and it usually lays a clutch of two eggs (Clement and Hathway 2000, del Hoyo *et al.* 2005).

## **Population size and trends**

Following a survey of Príncipe in 2007, a population estimate of 364 individuals (95% CI: 186-887) was put forward (Dallimer *et al.* 2010). However, the authors consider this to be an overestimate because the species does not occupy all areas of primary forest and the data may have been biased by the species' habit of readily approaching humans, thus it is estimated that there are fewer than 250 mature individuals (Dallimer *et al.* 2010). Moreover large areas of primary forest in the South of the island are inaccessible, making it hard to quantify the overall population size. The population is suspected to be in decline. However the rate of decline has not been estimated (BirdLife International, 2013). According to Jones and Tye (2006) and based on past records, the Príncipe Thrush has probably always been rare. It is still considered rare (Dallimer *et al.* 2010), a judgment reinforced by the fact that it is very tame compared to *T. olivaceofuscus*. Individuals readily approach people and may forage on the ground a few meters away from observers (Baillie and Gascoigne 1999, Melo 2007, King and Dallimer 2008), but sightings remain scarce and have only been noted within primary forest, an area of approximately 45 km<sup>2</sup> (Jones *et al.* 1991). According to Dallimer *et al.* (2010), historically, it is likely that the thrush population on Príncipe suffered a dramatic reduction in extent of occurrence after human colonisation in the 1500s resulted in the loss of most of the island's original forest (Jones and Tye 2006). Still, Dallimer *et al.* 2010 suggest that the species might have suffered a recent decline due to direct pressure, since some of the sites visited in 2002 had fewer or no birds in 2007.

## **2 – THREATS AND GAPS IN KNOWLEGDE**

### **Threats**

It is likely that deforestation at the time of human colonisation in the 1500s (Jones and Tye 2006) would have caused dramatic declines in this species (Dallimer *et al.* 2010). Deforestation is still a threat, but much reduced by the recent protection of the majority of primary forest on Príncipe (Dallimer *et al.* 2010). It is speculated that, as the species is very tame (Clement and Hathway 2000, Dallimer *et al.* 2010), it may suffer some mortality through opportunistic hunting (Dallimer *et al.* 2010). However, there is only circumstantial evidence from the comparison of survey data and interviews with local people that it is disappearing from areas of forest frequently used by people (Dallimer *et al.* 2010). Indeed, the areas of primary forest used by the species particularly towards the south end of the island are rarely visited by people nowadays, and direct hunting remains opportunistic and is done by the very few people who dwell there (S. Valle *pers. comm.*). Hunting of monkeys and collection of snails and parrots could however be bring in people who could opportunistically hunt the species. As a species that is restricted to one small island, it is potentially threatened by the introduction of alien species. The species could also be declining due to stochastic

processes. Improved access to areas where the thrush occurs due to ecotourism developments on the island, e.g. HBD - Boa Vida, could increase pressure on the species and the forest resources.

### Gaps in knowledge

Much is still not known about the species, and various gaps in knowledge need to be filled in order to take effective conservation action on the species. The fact that there is a central core area of the island that is inaccessible could already be presenting a challenge in estimating the population size since confirmation of presence/absence and number of birds in this area could result in an increase or decrease of the current population estimate (S. Valle *pers. comm.*). The key gaps in knowledge identified during the workshop include: (a) population size and trends due to lack of monitoring work, (b) breeding ecology of the species, (c) food preference and availability, (d) occurrence and impacts of predation by monkeys and genets, and (e) whether seasonal variation occurs. There is on-going work that is collecting data on endemic bird species of the island, including the thrush (S. Valle *pers. comm.*).

The results of the threat and knowledge gap analysis undertaken during the action planning workshop are presented in Figure 2.

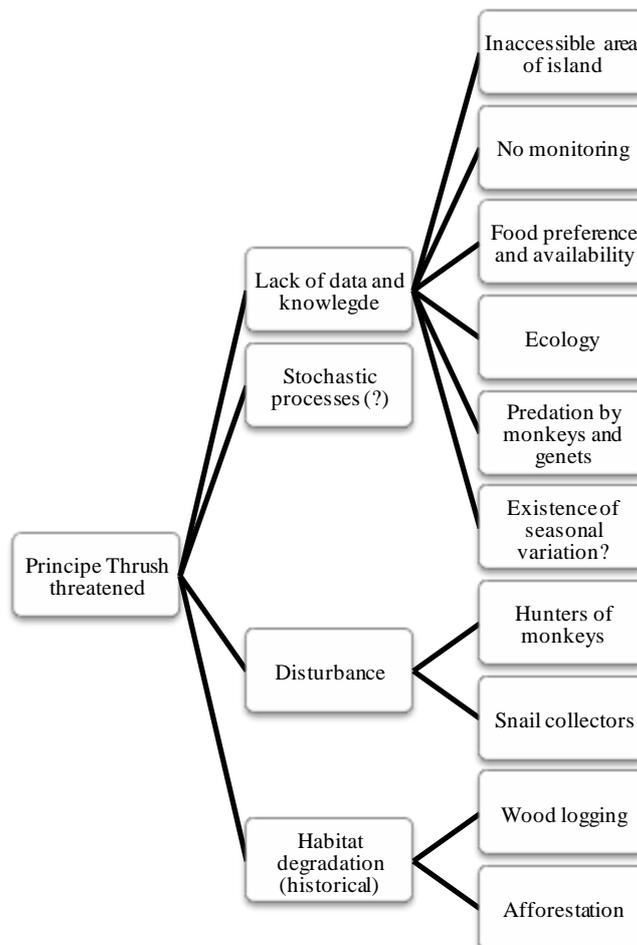


Figure 2: Threats and knowledge gap analysis for the Príncipe Thrush

### **3 –POLICIES, LEGISLATION AND ONGOING ACTIVITIES**

#### **Policy and legislation**

##### International level

In the IUCN Red List the Principe Thrush is categorised as Critically Endangered due to its extremely small and declining population and the small area it occupies. São Tomé e Príncipe is signatory to the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species (CITES), both of which are relevant to conservation of the species.

##### National level

Whilst the majority of the environmental legislation is soft law and does not have any legally binding force, mechanisms and laws exist that could be used to protect the habitat used by the four Critically Endangered bird species in the country. However, it is currently unclear as to whether these laws actually apply to these species in all (or any) cases. Clarification of legislation and direct, unequivocal protection conferred upon core habitats and birds within the existing framework of legislation is therefore essential. Lack of enforcement or even concern for the protection of this and other species could be the biggest obstacle to conservation efforts. Príncipe is an autonomous region and as such has the ability to pass laws independently from the National Government, e.g. in the past the Região Autónoma do Príncipe has passed laws to ban turtle hunting and the parrot trade. The following are relevant for the conservation of the species:

- Basic environmental law (Law n.10/99) - defines the basic principles of environmental law.
- Law for the conservation of fauna, flora and protected areas (Law n. 11/99) - provides a framework for species protection.
- Regulation on the process of environmental impact assessment (Decree n. 37/99) - valuable regulation for ensuring habitat protection.
- Forestry law (Law n. 5/01)
- The law on creation of Príncipe Obô Natural Park (Law n. 6/06) - identifies the boundaries of the parks.
- Hunting law (in preparation) - this law will state that hunting any of the critically endangered species is illegal.

#### **On-going activities**

Most of the remaining primary forest on Príncipe is protected by Parque Natural do Obô do Príncipe. As part of the management plan for protected areas, the species was chosen as one of a suite of indicator species that will be monitored through regular surveys in order to assess the effectiveness of the protected areas for biodiversity conservation (Dallimer *et al.* 2010). The main management plan is in place from 2010 to 2014, after which it should be reviewed. There are also more specific yearly action plans. The implementation of both types of plan is, however, minimal as there is limited capacity or resources for implementation. In addition, the species is hardly mentioned in either the national or regional management plans. Research is under way to come up with new population estimates and to better understand the habitat requirements of the species (S. Valle *pers. comm.*).

In 2012, the Island of Príncipe was declared as the country's first Biosphere Reserve, which includes the entire emerged area of the island of Príncipe, its islets and Tinhosas islands. This declaration was an important part of a plan to develop Príncipe as a model for promoting integrated eco-tourism development.

#### 4 - FRAMEWORK FOR ACTION

**Goal:** Increase the population size of Príncipe Thrush's and expand its current range.

*Indicator:* Species down-listed from the 'Critically Endangered' global category in the IUCN Red List.

**Purpose:** Improve the current knowledge base and conservation status of the Príncipe Thrush within the next five years.

#### Objectives and actions

##### **Objective 1: Increase understanding of ecology, population size and distribution of species (Research and monitoring)**

<i>Action</i>	<i>Priority</i>	<i>Timescale</i>	<i>Responsible organisation</i>
1.1 Undertake scientific research on:		Immediate	Universities + BirdLife + PNP
(a). predation by monkeys or genets (commence study)	Medium		
(b). ecology of the species and causes for declining	High		
(c). demography and genetic diversity	Medium		
(d). Impact of human activities, especially hunting and snail collection	High		
1.2 Undertake monitoring of the species:		Immediate	Universities + BirdLife + PNP
(a). Training on monitoring	Medium		
(b). Accurate and updated estimate of population size (including least accessible areas) and implementation of a regular monitoring programme	High		
(c). Census in the regular transects at least once per year	Medium		
1.3 Keep records and sighting of the species:		Immediate	BirdLife + PNP
(a). Train and certify the guides information on data collection	High		
(b). Collect all records and sightings using log book for	High		

birdwatchers, ornithologists, tourists etc.			
(c). Develop centralized database with all records	High		
(d). Prepare terms of reference for database management and access rules	Medium		
1.4 Undertake monitoring and surveillance of afforestation and wood logging	High	Ongoing and immediate	Dept of Forestry & PNP
1.5 Undertake monitoring and surveillance of other human activities that may affect species, including hunting, snail and parrot harvesting	High	Immediate	PNP

**Objective 2: Support the legal mechanisms to halt the main threats and ensure legal protection laws refer the threatened species**

<i>Action</i>	<i>Priorities</i>	<i>Timescale</i>	<i>organization</i>
2.1 Support enforcement to stop forests from being destroyed	High	Ongoing and immediate	PNP
2.2 Support enforcement to stop species from being hunted or threatened by other factors (e.g. invasive species)	High	Ongoing and immediate	PNP
2.3 Transpose national hunting law into Principe autonomous legislation	Medium	2015 (depending on the designation of the national law)	Regional Secretary for Environment and Infrastructures and Natural Resources
2.4 Feed information on the species and components of this SAP into the next management plan (2014-2018?) and help them implement some of the relevant identified key activities	High	2015	BirdLife, PNP

**Objective 3: Enhance appreciation of value of the endemic species by the public**

<i>Action</i>	<i>Priorities</i>	<i>Timescale</i>	<i>organization</i>
3.1 Identify targets for a public awareness campaign and implement the campaign		Immediate	PNP + BirdLife + NGOs
(a). Local communities;	High		
(b). Professional sectors (hunters, loggers, tourism operators)	Medium		
(c). Decision makers (government, NGOs, tourism operators)	High		
(d). Schools to influence the scholar curriculum.	Medium		

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